

Initiative of the Asian Network for Sustainable Organic Farming Technology

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Abstract

Construction of the Asian Network for Sustainable Organic Farming Technology (ANSOFT) will be cooperatively administered by the public researchers in 12 Asian member countries from 2010 to 2012. ANSOFT will bring forward multiple reports, which will be constantly renewed by the member countries, regarding environmental issues, plant and landscape protection techniques, regulations and policies of each country's government on an organic agriculture, and natural resources such as organic seeds and biological agents.

Introduction

Mostly, destitute economic and agricultural structures in Asia do not satisfy well with food safety, environmental protection, national sovereignty, and energy matter (APEI, 1997). Increased population in many Asian countries resulted in needing more agricultural productivity with less production cost (APEI, 1997). Organic agriculture can, therefore, come up with a practical alternative for farmers suffering from shortage of chemical fertilizer and pesticide (FAO, 2002). Asian traditional agricultural systems can be easily applicable to the organic agriculture due to their least chemicals usage with financial difficulties (Hsieh, 2005). However, traditional, sustainable, and small organic farms in Asia have many technical and social obstacles for increasing both products in farms and sales in market. Public researchers/scientists in each country are needed to exchange their experiences and information for approaching strategic and effective transfer of innovative techniques to farmers and for sharing their sustainable organic agriculture. In order to achieve the matter of great concerns, we organized a union of the Construction of the ANSOFT, which was cooperatively administered by the public researchers in each of Asian countries.

Materials and Methods

Project activities included: 1) construction and management of website for ANSOFT, 2) workshop and working group meeting, 3) publication of technical reports, newsletters, and workshop proceedings, 4) construction of database for organic farming technology, alternative techniques for pest and soil management, traditional knowledge, and natural resources, and 5) introduction of organic model in each member country sharing successful experiences. Recently, researchers of the NAAS in RDA invited the partner institutes, and MOU was signed with the partner institutes

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for the ANSOFT inauguration in November 3 of 2009 (Lee, 2010). Based on these MOUs, organizing meeting (the 1st ANSOFT) was held to share information on the environment of partner institutes and to discuss the future plans of ANSOFT in November 29 of 2010. In 2011, the IFOAM international conference on the global organic agriculture will be held in Namyangju, Korea. We will have the 2st ANSOFT workshop on Asian organic farming technology and join in the IFOAM conference (Lee, 2010).

Results and Discussion

ANSOFT will facilitate the construction of organic farming information by “workshop” and “data collection” (indicated in “A” of Fig. 1) of each member in 2011 and 2012 (Lee, 2010). Each of 12 countries will “evaluate” (indicated in “B” of Fig. 1) the collected information of the construction, and the authorized information will be posted in the ANSOFT website. Furthermore, various information in ANSOFT “website” (indicated in “C” of Fig. 1) will be verified by cooperative international research organizations such as the FiBL and ICROFS with distinguished expertise. The ANSOFT networking will expand to other institutes in EU and U.S.A. for sharing information and cooperating research in an organic agriculture. These data and experiences will be used to develop standards and recommendations for organic farmers in the member countries.

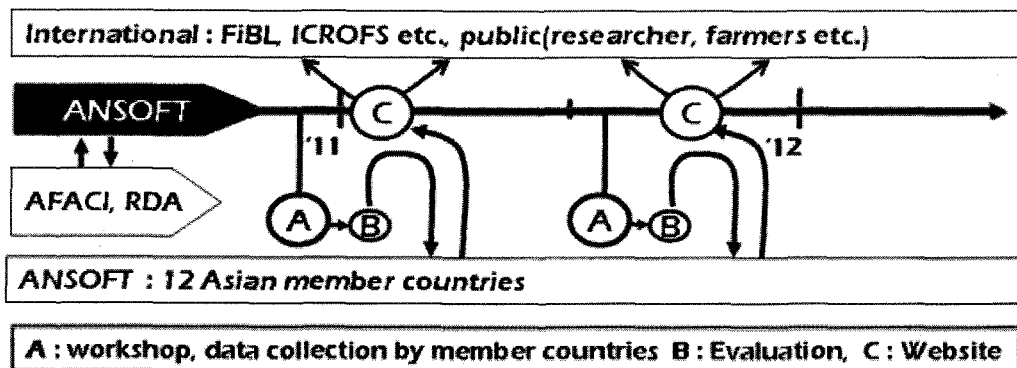


Fig. 1. Acquisition, verification, and development of information obtained by each of 12 Asian countries

Information of organic technique (Fig. 1), obtaining by each of 12 Asian countries, will be divided into 5 subjects, which are general organic information, technical problems in organic usage, cost in organic systems, source of information, and various effects of organic systems in each country (Table 1).

Tab. 1: Organic information in each of 12 Asian countries

General	Technical issue	Cost	Source of information	Other effects
Purpose of use	Organic regulation and criteria	Equipment and maintenance	Photos/sources	Positive environmental effects
Outline & Principles	Effect on human body	Material costs	Developer of technique	Negative environmental effects
Main Effects	Social issue	labour (cost)	Data sources	Farm responses (positive)
Target Crops and Application Period	Knowledge transfer	Disposal of waste matter	Others	Farm responses (negative)
Scale of application	Manufacturing and packing	Other costs		Opinion of neighbor farm
Other Uses	Other issues			Other effects

Information of organic technique (Fig. 1), obtaining by each of 12 Asian members, will also provide detailed aspects for various techniques of each country (Table 2). ANSOFT will publish annual country reports of the organic farming technologies and sharable natural resources in each member countries. This will promote informational exchange between nations as well as develop working groups including researchers, international organizations, and national authorities, contributing to solid scientific information and to productive improvement in organic agriculture and agribusiness activities.

Tab. 2: Survey of organic techniques in each of 12 Asian countries

Category	Sub-category	Organic Farming Techniques
Soil Management	Plowing	No-tillage, Minimum tillage, Deep cultivation
	Crop management	Crop rotation, Catch cropping, Mixed cultivation
	Others	Paddy-upland Rotation, Soil addition, Peat moss
Nutrient Management	Green Manure	Vetch, Hairy vetch, Ryegrass, Crotalaria, Mustard
	Compost	Livestock manure, Rice straw, Bokashi compost
	Organic fert.	Oilcake

	Liquid fert.	Fermented liquid fertilizer, Fish emulsion, Oriental medicine
	Microbial fert.	Phosphate solubilizing micro-organism, Lactobacillus
	Others	Bran (wheat) powder
Insect & Disease Control	Disease	Egg yolk oil, Rain proof cultivation(pepper)
	Insect	diatomaceous earth, Kaolin clay, Machine oil, Pheromone
	Others	Chitosan, Plastic tunnel, (insect) netting, High pressure watering
Weed Control	Mulch	Plastic film mulch, Cover crop
	Mechanical control	Flaming, Mechanical weed control
	Ecological resources	Freshwater snail for weed control
	Others	Vinegar application
Others	Seed/Cultivar	
	Postharvest	Ozonated water
	Sales, Distribution	Direct dealing (farmer's market), Cooperative, Major supermarket
	Others	Pyroligneous liquor

Conclusions

ANSOFT Internet website provides the place for discussion and information exchange as well as database of organic farming technologies. Either open or restricted access will be provided for public and project members. The successful organic model farms in each member will be introduced by the partner institutes to transfer innovative technology for farmers.

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